
10.0 GLOSSARY OF TERMS

Above Ground Storage Tank Sites (ASTs): These are sites either containing above ground storage tanks (ASTs) or found to show evidence of an existing or removed tank during site reconnaissance. Depending on the type, age, and condition of the AST and associated piping, sites of this type may present a risk for soil and/or groundwater contamination.

Acceptable Community Fish Rating: Rating used in Great Lakes Environmental Assessment Section, procedure 51.

Air Quality Index (AQI): The AQI is a guide for reporting daily air quality. It tells you how clean or polluted your air is, and what associated health concerns you should be aware of. The AQI focuses on health effects that can happen within a few hours or days after breathing polluted air. USEPA uses the AQI for five major air pollutants regulated by the Clean Air Act: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. For each of these pollutants, USEPA has established national air quality standards to protect against harmful health effects.

Alternative: A combination of potential road segments or transportation improvements which link US-131 from the southern Michigan State border to just north of the northern city limits of the City of Three Rivers. Alternatives for the US-131 Improvement Study have included No-Build (Do nothing), Transportation System Management, transit and multi-modal alternative, and a series of potential freeway Build Alternatives.

American Association of State Highway and Transportation Officials (AASHTO): A nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico whose primary goal is to foster the development, operation, and maintenance of an integrated national transportation system.

American Electric Power (AEP): A multinational energy company with energy assets including electricity, natural gas, and coal.

American Society for Testing and Materials (ASTM): Founded in 1898, ASTM is a not-for-profit organization providing standards that are accepted and used in research and development, product testing, quality systems, and commercial transactions around the globe. In over 130 varied industry areas, ASTM standards serve as the basis for manufacturing, procurement, and regulatory activities.

Annual Average Daily Traffic (AADT): The average number of vehicles passing a fixed point in a 24-hour time frame. Used as a measure of traffic volume on a roadway.

Archaeological Site: The location of past cultural activity which could be used to describe and explain the nature and evolution of cultural systems; a defined space with mainly continuous archaeological evidence.

Architectural Resource: A building or other structure with potential historic significance based on its age, type, or its association with a person(s) or event(s).

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Created in 1980, it is also known as Superfund. This is the legislation that created the Agency for Toxic Substances and Disease Registry (ATSDR).

Clean Air Act Amendments (CAAA): The CAAA is legislation designed to curb three major threats to the nation's environment and to the health of Americans: acid rain, urban air pollution, and toxic air emissions. It called for establishing a national permits program to make the law more workable, and an improved enforcement program to help ensure better compliance with the Act.

Combined Sewer Overflows (CSOs): Combined sewer systems are sewers that are designed to collect rainwater runoff, domestic sewage, and industrial wastewater in the same pipe.

Congestion: The level at which transportation system performance is no longer acceptable due to traffic interference. The level of acceptable performance may vary by type of transportation facility, geographic area, and/or time of day.

Controlled Access: This is the regulated limitation of access and is achieved by regulation of public access rights into (ingress) and out of (egress) properties abutting a roadway.

Cross-Section: Depicts the characteristics of a roadway facility including lane, shoulder, and typical right-of-way widths.

Cultural Resources: A location, building, structure, or place with potential historic or archaeological significance.

Cumulative Impacts: The impact on the environment which results from the incremental impact of action(s) when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such action(s).

Deflection Limit: The amount of bending allowed for a bridge deck when it is supporting a load.

Design Loading: The amount of weight a bridge is designed to hold.

Design Hour: An hour with traffic volumes that represent a reasonable value for designing the geometric and control element of a facility.

Design Speed: A speed used to design the horizontal and vertical alignments of a highway.

Diverge: A movement in which a single lane of traffic separates into two lanes without the aid of traffic control devices such as when vehicles exit a freeway.

Draft Environmental Impact Statement (DEIS): An environmental document that is prepared when it is initially determined that the action/project may cause significant impacts to the environment, when environmental studies and early coordination indicate significant impacts, or when review of a previously prepared environmental assessment indicates that the impacts anticipated to result from the project may be significant. The DEIS compares all reasonable alternatives to the proposed project and summarizes the studies, reviews, consultations, and coordination required by legislation and Executive Orders to the extent appropriate at the draft stage in the environmental process.

Endangered Species: Any species of fish, plant life, or wildlife that is in danger of extinction throughout all or a significant part of its range, other than a species of insects determined by the Department, or the Secretary, of the United States Department of the Interior to constitute a pest whose protection under this part would present an overwhelming and overriding risk to humans.

Facility: Any type of transportation infrastructure such as highways, local roads, transit centers, High Occupancy Vehicle (HOV) lanes, etc. that is used to move people and goods.

Family Independence Agency (FIA): The FIA is Michigan's public assistance, child and family welfare agency directing the operations of public assistance and service programs through a network of over 100 county family independence agencies in every county in Michigan

Farmland Protection Policy Act (FPPA): The purpose of FPPA is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural uses. FPPA ensures, to the maximum extent practicable, that Federal programs are administered in a manner that is compatible with State, unit of local government, and private programs to protect farmland.

Farmland and Open Space Preservation Program: This program enables a farm owner to enter into a development rights agreement with the State, ensuring that the land remains in an agricultural use for a minimum of 10 years and that the land is not developed in a non-agricultural use.

Farmlands of Local Importance: The Natural Resources Conservation Service defines these farmlands as "those lands that are nearly prime and that economically produce high yields when treated and managed according to modern farming methods. Some may produce as high a yield as prime farmlands, if conditions are favorable" (USDA, 1983).

Federal Highway Administration (FHWA): Division of the US Department of Transportation which funds highway planning and construction programs.

Final Environmental Impact Statement (FEIS): A document prepared in accordance with the National Environmental Policy Act (NEPA) identifying and addressing the social, economic, and environmental impacts of a Preferred Alternative and addressing public comments received during the formal public commenting period as well as the public comments received throughout the entire NEPA process.

Fen: A rare type of wetland that is low in nutrient systems and receives carbonate-rich ground water from seeps and springs.

Freeway: A divided arterial highway for through traffic with limited access, the intersections of which are usually separated from other roadways by differing grades (i.e. bridges).

Gables: The triangularly shaped area enclosed by the two sloped surfaces of a gable roof, which is a simple roof composed of two flat surfaces meeting to form a straight ridge, and the wall below. [With alterations, from: A Concise History of American Architecture by Leland M. Roth. New York: Harper & Row, Publishers, 1979.]

Gore Area: The area located immediately between the left edge of a ramp pavement and the right edge of the roadway pavement at a merge or diverge area.

Gothic Revival: A style of architecture popular in the United States between 1840 and 1880 characterized by the use of medieval or Gothic details, which commonly included pointed-arch (Gothic) windows, steeply pitched roofs, and elaborate decorated vergeboards at each gable.

Greek Revival: A style of architecture popular in the United States between 1825 and 1860 characterized by the use of classical details patterned after ancient Greek and Roman architecture. Greek Revival-style buildings commonly include prominent columns, wide bands of trim below the eaves or gables, and elaborate door surrounds.

Hydric Soils: A hydric soil is a soil that is saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions that favor the growth and regeneration of hydrophytic vegetation.

Hydrophytic Vegetation: Plants which grow in wetlands and exhibit certain physical characteristics such as shallow root systems, swollen trunks, or roots found growing from the plant stem or trunk above the soil surface.

Illustrative Alternatives: Preliminary concepts developed at the onset of a transportation planning project. Illustrative Alternatives are typically very conceptual by nature and are intended to examine all potentially reasonable alternatives to address the transportation needs of the study area, prior to detailed study to identify their feasibility.

Impacts: Effects which occur as a result of implementing a transportation improvement; most commonly occurs when proposed right-of-way actually crosses a resource in question such as a residence, business, wetland, or other resources.

Infrastructure: Term used to describe the physical assets of a society or community including roads, bridges, transit facilities, bikeways, sidewalks, parks, sewer/water systems, communications networks, and other capital facilities.

Italianate Style: Configuration of artistic elements that together constitute a manner of expression peculiar to a certain epoch, people, or individual. A mid-19th-century North American residential architecture style, often featuring a low-pitched hipped roof topped by a belvedere.

Land Evaluation Site Assessment (LESA): LESA is a point-based approach for rating the relative importance of agricultural land resources based upon specific measurable features.

Karst Formation: This is a geological process, occurring over many thousands of years, resulting in unusual surface and subsurface features ranging from sinkholes, vertical shafts, disappearing streams, and springs, to complex underground drainage systems and caves.

K-value: The length of a vertical curve divided by the algebraic difference between intersecting tangent grades used for the vertical design of a roadway.

Land Use: The way specific portions of land or the structures on them are used and are

typically based on local zoning guidelines. Example land uses include commercial, residential, industrial, retail, agricultural, vacant, etc.

Level-of-Service (LOS): A term that reflects the ability of a roadway to accommodate traffic. LOS ranges from A (representing free-flowing traffic at high speeds), B (speed somewhat restricted and short delays), C (speed is determined by traffic and moderate delays), D (tolerable but fluctuating speeds), E (roadway near capacity with limited speed and long delays) to F which has high congestion and generally restricted operating speeds.

Limited Access Facility: A freeway facility that does not have driveway access or roadway intersections. Access is limited to freeway interchanges.

Material Licensing Tracking System (MLTS): A database maintained by the Nuclear Regulatory Commission (NRC) that contains sites which possess or use radioactive materials and are subject to NRC licensing requirements.

Median: A barrier, often found on multi-lane roadways or freeways, which provides separation distance between conflicting traffic movements. A median can consist of either a grass or natural setting typical of a rural cross-section, or a concrete wall or guardrail barrier which is typical of an urban setting.

Merge: A movement in which two separate lanes of traffic combine to form a single lane without the aid of traffic signals or other right-of-way controls such as traffic merging or entering onto a freeway from an on-ramp.

Michigan Department of Environmental Quality (MDEQ): The State agency responsible for review of any wetland, floodplain, potentially contaminated sites, air quality, and/or water quality impacts.

Michigan Department of Natural Resources (MDNR): The State agency responsible for review of State threatened and endangered species, parkland, and fisheries impacts.

Michigan Department of Transportation (MDOT): The State agency responsible for planning, construction, and maintenance of all interstate, US, and State highways, bridges, and other modes of transportation within the state of Michigan.

Mitigation: Actions provided to avoid, minimize, or compensate the effect of impacts occurring as a result of an activity.

National Ambient Air Quality Standards (NAAQS): Air quality standards set by the USEPA for pollutants considered harmful to public health and the environment.

National Environmental Policy Act (NEPA): Federal act passed in 1969 which requires the assessment of the social, economic, and environmental impacts a federally funded or federally permitted project might cause, including identification of the purpose of and need for the project, and evaluation of alternatives to minimize resulting impacts.

National Pollution Discharge Elimination System (NPDES): The national program for issuing, modifying, revoking and reissuing, terminating, monitoring, and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 405 of Clean Water Act.

National Register of Historic Places (NRHP): The National Register of Historic Places is the nation's official list of cultural resources worthy of preservation. This list was established under the National Historic Preservation Act of 1966 and is administered by the Department of the Interior

Natural Resources Conservation Service (NRCS): The Federal agency responsible for providing leadership in a partnership effort to help people conserve, maintain, and improve our natural resources and environment.

Network: A transportation system with its many roadways and routes often shown either graphically or mathematically.

Non-Attainment Area: A designation by the United States Environmental Protection Agency of any place in the United States failing to meet national ambient air quality standards (NAAQS).

Non-Motorized Transportation: Bicycles, roller blades, running, walking, wheelchairs, scooters, sled dogs, etc.

Peak Hour: The 60-minute period in the AM or PM in which the largest volume of travel is generally experienced (e.g. rush hour).

Pollutant Standards Index (PSI): PSI was developed by the EPA to provide consistency and uniformity in reporting air pollution levels to the public on a daily basis.

Practical Alternative: Practical Alternatives are developed from refinements made to the initial Illustrative Alternatives. These alternatives are subject to increased levels of traffic, engineering, social, economic, and environmental analysis as well as public and agency comment to determine if they are capable of meeting the purpose and defined goals of the project.

Preferred Alternative: The Preferred Alternative is selected from the Practical Alternatives after extensive engineering, social, economic, and environmental analysis. It could include components of several Practical Alternatives in any combination found to be the most beneficial.

Prime Farmland: The Natural Resources Conservation Service has designated prime farmland as "land that has the best combination of physical and chemical characteristics for producing food, forage, fiber, and oilseed crops. The land could be crop, pasture, range, forest, or other uses, but does not include urban built-up land or water bodies since these two are considered irreversible uses. It has the soil quality, growing season, and moisture supply needed to economically produce and sustain high yields when treated and managed according to modern farming methods, including water management" (USDA, 1983).

Public Hearing: A hearing formally advertised and convened to afford any person who deems their interest in property to be affected by a proposal an opportunity to be heard.

Recommended Alternative: An alternative recommended in the Final Environmental Impact Statement for Federal Highway Administration approval as required for design and construction utilizing federal funding.

Resource Conservation and Recovery Act (RCRA): Passed by Congress in 1976 to provide a cradle to grave management of hazardous waste. Regulation is enforced by the United States Environmental Protection Agency (USEPA) and Department of Environmental Protection (DEP).

Right-of-Way (ROW): Public land reserved for locating infrastructure such as a roadway or a utility line. A road right-of-way includes area for any required shoulders, drainage ditches, curb, median, barriers, and fences in addition to the roadway.

Rural Cross-Section: A roadway facility characterized by the presence of open drainage into ditches and no median barrier walls separating opposing lanes of traffic.

(Secondary) Impact: Effects "caused by an action later in time or farther removed in distance (from the right-of-way), but which is still reasonably foreseeable" (40 CFR 1508.8).

Section 4(f): This is Section 4(f) of the Department of Transportation Act of 1966. Section 4(f) states that no highway project should be approved which requires the "use" of any publicly owned land from a public park, recreation area, wildlife and waterfowl refuge, or historic site unless there is no feasible or prudent alternative to the use of such land. In addition, adverse impacts to these 4(f) sites must include all possible planning to minimize harm resulting from such use. In the context of Section 4(f), "use" can be either a direct impact (taking of property), or a "constructive use", which may not actually require acquisition of land, but otherwise impairs the function of the resource through changes in access or surroundings.

Section 106: Section 106 of the National Historic Preservation Act of 1966 is the main protection that archaeological, historical, and cultural resource sites have against the encroachment of federally-funded programs in the United States. Section 106 requires that the State Historic Preservation Office (SHPO) review all federal actions for any potentially adverse effect on cultural resources.

State Historic Preservation Office (SHPO): In 1966, in response to growing public interest in historic preservation, Congress passed the [National Historic Preservation Act](#). The act required that each state establish a SHPO and that the governor of each state appoint an officer to oversee the preservation activities. Michigan's SHPO was established in the late 1960s. Its main function is to provide technical assistance to local communities in their efforts to identify, evaluate, designate, and protect Michigan's historic resources. The SHPO works closely with the Office of the State Archaeologist to accomplish its goals.

Small Quantity Generator Site: The Resource Conservation and Recovery Act database is maintained by the U.S. EPA and includes information on sites that generate, store, treat, or dispose of hazardous waste as defined by the Act. A site is defined as a small quantity generator, large quantity generator, or storage/treatment facility depending on the quantity of waste generated and the length of time it is kept on site.

Special Concern Species: While not afforded legal protection under the Act, many of these species are of concern because of declining or relict populations in the state. Should these species continue to decline, they would be recommended for Threatened or Endangered status. Protection of Special Concern species now, before they reach dangerously low population levels, would prevent the need to list them in the future by maintaining adequate numbers of self-sustaining populations within Michigan. Some other potentially rare species are listed as Special Concern pending more precise information on their status in the state; when such information becomes available, they could be moved to Threatened or Endangered status or deleted from the list.

Superelevation: The slope to which a roadway lane is angled.

Superstructure: Costly bridge, framework, building, or other object that has been put together from many different parts.

State Historic Preservation Office (SHPO): The state agency having jurisdiction over archaeological and aboveground historic architectural resources (e.g. cultural resources).

Stopping Sight Distance: Stopping sight distance is the sum of two distances: (1) the distance traversed by the vehicle from the instant the driver sights an object necessitating a stop to the instant the brakes are applied; and (2) the distance needed to stop the vehicle from the instant brake application begins. These are referred to as brake reaction distance and braking distance, respectively.

Technical Memorandum: Reports detailing the processes and descriptions of various analyses such as Traffic, Air and Noise, Wetland Delineation, and others which were used to prepare an Environmental Assessment or Draft and/or Final Environmental Impact Statement.

Temporary Impact: Refers to impacts occurring during construction that cease to exist after construction associated with the project is completed (e.g. dust associated with construction activities).

Threatened Species: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Toxic Chemical Release Inventory System Site (TCRIS): A database that identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities under SARA title III, Section 313. This database is maintained by the U.S. EPA.

Traffic Count: Mechanical, digital, or photographic means of quantifying the number and type of vehicles at a given location. Counts may be determined from raw base data (axle counts divided by two to give an estimation of passenger vehicles), or by more sophisticated means to quantify vehicle type (passenger, light truck, heavy truck, bus, etc.). Counts typically are performed for an identified peak period (AM - early/"rush hour" morning, PM - late/"rush hour" afternoon, other industry-determined period) or for a 24-hour period. 24-hour counts may be adjusted for weather, seasonal, and other factors to arrive at a representative annual average daily traffic count (AADT).

Transit: Transportation mode involving buses, trains, and other vehicles that individually move larger numbers of people than do individual automobiles. Also known as mass transit, public transit, public transportation, or urban transit.

Transportation System Management (TSM): Reasonable small-scale roadway improvements such as traffic signal improvements, turn restrictions, turn lanes, and short distance local road improvements.

Travel Demand: The counted or projected volume of traffic that is or will be utilizing a roadway in a specified time period (i.e., 24-hours, peak periods, etc.).

Travel Forecasting: The process by which demographic (population and employment) and land use projections are used to determine potential future vehicle trips on a given transportation network.

Trout Stream: A stream designated as potential trout habitat based on the average temperature of the water, approximately 55°F or colder.

Under Clearance: The vertical distance from the surface of a roadway to the bottom of a bridge deck crossing over that roadway.

Underground Storage Tank Site (UST): Sites containing one or more underground storage tanks (USTs) or those found to show evidence of an existing or removed tank during site reconnaissance. Depending on the type, age, and condition of the UST and associated underground piping, sites of this type may present a risk for soil and/or groundwater contamination.

Unique Farmlands: The Natural Resources Conservation Service has defined unique farmlands as "land other than prime farmland that is used for the production of specific high value food and fiber crops. These lands have a special combination of factors needed to economically produce sustained high quality yields of a specific crop when treated and managed according to modern farm methods. The special factors that make the land unique include soil quality, growing season, temperature, humidity, elevation, moisture supply, or other conditions such as nearness to market that favor growth of a specific crop. Moisture supply is in the form of stored moisture, precipitation, or a developed irrigation system."

United States Bureau of Economic Analysis (BEA): An agency of the Department of Commerce and part of the Department's Economics and Statistics Administration. It seeks to strengthen the understanding of the U.S. economy and its competitive position by providing the most accurate and relevant Gross Domestic Product (GDP) and economic accounts data in a timely and cost-effective manner.

United States Environmental Protection Agency (USEPA): A federal agency that is charged with protecting the natural resources of the country.

United States Army Corps of Engineers (USACE): The federal agency responsible for review of all water crossings of navigable streams. The current US-131 study area does not include any navigable waterways. The USACE also serves in an advisory role on wetland impacts of Michigan highway projects.

United States Department of Agriculture (USDA): The federal agency responsible for review of any prime and unique farmland impacts.

United States Fish and Wildlife Service (USFWS): The federal agency responsible for review of the impacts on any federally listed threatened and endangered species. The USFWS also serves as an advisory agency for many other environmental issues including wetland and habitat impacts.

Urban Cross-Section: A roadway facility characterized by enclosed drainage. Urban divided freeway cross-sections have a median barrier wall separating opposing lanes of traffic.

Weaving: The crossing of two or more traffic streams traveling in the same direction along a significant length of a highway, without the aid of traffic control devices except for guide signs.

Wetland Complex: Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetland Mitigation: Avoidance, minimization, and compensation for the loss of functional values associated with wetlands impacted by an activity. The most common types of compensation include wetland restoration reestablishing some or all of the values associated with wetland where wetland formerly occurred, and wetland creation (establishing new wetland in an upland or drained area).